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US Patent Application 10/016,372
Atty Docket (MM) 54 192
Tontarra

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re: US Patent Application 10/016,372
Title: Surgical Instrument
Applicant Tontarra
Attorney Docket: (K) 54 192
Art Unit 3731
Primary Examiner Kevin Truong
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PO Box 1450
Commissioner for Patents
Alexandria, Va. 22313-1450

Amendment

Dear Examiner Truong:

This responds to the Office Action mailed September 25, 2003.

A clean set of the claims, as amended, follows:

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1. (Currently Amended): A surgical instrument comprising:

a main part (12),
at least one movable part (13) movable relative to the main part, which is guided with a guide (31) arranged on the movable part in a complementary guide (32) arranged on the main part (12),
a handle (14) arranged on the main part (12) comprising a stationary handle portion (16) and an actuatable handle portion (19) that actuates the movable part (13),
a locking device (26, 56, 66, 76) having a first position (33) in which the movable part (13) is arranged in a working position (29) and in an initial position (22), the locking device having a second position (34) in which the movable part (13) is removable at least partially from the main part (12) and,
a releasable articulated connection (41) between the movable part (13) and the actuatable handle portion (19),
wherein in a first phase the movable part (13) comes free from the guide and complementary guide (31, 32) on transfer from the initial position (22) into a further position (39), whereby the movable part (13) and the main part (12) are coupled by the releasable articulated connection (41), and in a second phase the releasable articulated connection (41) between the movable part (13) and the actuatable handle portion (19) is releasable.

2. (Cancelled).

3. (Previously Presented) The surgical instrument according to claim 1, wherein in a first phase after release of the guide (31) of the movable part (13) from the

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complementary guide (32) of the main part (12), the movable part (13) is at least partially pivotable around a pivot axis of the releasable articulated connection (41).

4. (Previously Presented) The surgical instrument according to claim 1, wherein the releasable articulated connection (41) comprises a U-shaped seating (72) in the actuatable handle portion (19) and a pin (71) on the movable part (13) mounted in the U-shaped seating, and wherein the U-shaped seating (72) comprises an open end (86) that is constricted by a resiliently yieldable latch element (73).

5. (Previously Presented) The surgical instrument according to claim 4, wherein the latch element (73) comprises a ball (87) or other construction that is arranged under a spring force in a bore (74) and forms a constriction (86) of the U-shaped seating (72).

6. (Previously Presented) The surgical instrument according to claim 4, wherein a holding force of the latch element (73) is adjustable by a threaded pin (79) arranged in the bore (74) that acts on the ball (87) by means of a spring element (78).

7. (Previously Presented) The surgical instrument according to claim 1, wherein the releasable articulated connection (41) comprises a U-shaped seating (72) in the actuatable handle portion (19) and a pin (71) mounted in the movable part (13), and wherein an open end of the seating (72) comprises an elastically yieldable latch element.

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8. (Previously Presented) The surgical instrument according to claim 7, wherein the elastically yieldable latch comprises an elastomer.

9. (Previously Presented) The surgical instrument according to claim 1, wherein the releasable articulated connection (41) comprises a seating (72) in the actuatable handle portion (19), and a pin (71) of the movable part (13) mounted in the seating, and wherein an open end of the seating (72) comprises a rigid constriction (86), and wherein the pin (71) mounted in the seating (72) comprises a flat that in a given angular position is smaller than an inside width of the constriction (86).

10. (Previously Presented) The surgical instrument according to claim 1, wherein the releasable articulated connection (41) comprises a U-shaped seating (72) in the actuatable handle portion (19) and a pin (71) of the movable part (13) mounted in the seating, and wherein an open end of the seating (72) has a rigid constriction (86), and wherein the pin (71) is spring mounted transversely of an opening and closing movement of the movable part and has in a first position a diameter greater than an inside width of the constriction (86) and has in a further, actuatable position, a diameter smaller than an inside width of the constriction (86).

11. (Previously Presented) The surgical instrument according to claim 1, wherein upon changing over the movable part (13) from a cleaning position (46) to the working position (22), the guide sections (31) of the movable part engage in seatings of the main part (12), and by means of pressing the actuatable handle

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portion (19), the guides and the complimentary guides (31, 32) automatically engage in each other.

12. (Previously Presented) The surgical instrument according to claim 11, wherein the complementary guide (32) comprises a first section that runs obliquely in the main part (12), and which moves the movable part (13) toward the main part (12) and changes the movable guide over into the working position (29).

13. (Previously Presented) The surgical instrument according to claim 1, wherein the locking device comprises a latch (26, 56, 67, 77) which is at least one of frictionally or positively disposed at least in the first position (33).

14. (Previously Presented) The surgical instrument according to claim 1, wherein the locking device (26, 56, 66) comprises a latch (27, 57, 67) on the handle (14).

15. (Previously Presented) The surgical instrument according to claim 14, wherein the latch (27, 57, 67) is provided on one of the stationary or actuatable handle portions (16, 19).

16. (Previously Presented) The surgical instrument according to claim 1, wherein the locking device comprises a pivotable latch (27) provided on the stationary handle portion (16) that engages the actuatable handle portion (19) near a hinge pin (18).

17. (Previously Presented) The surgical instrument according to claim 16, wherein the pivotable latch (27) has a bounding element (47) determining a locking position (33) of the latch.

18. (Previously Presented) The surgical instrument according to claim 13, wherein the latch (27) in an unlocking position (34) pivotably releases a further pivoting

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region of the actuatable handle portion (19), which is limited by a stop (37)
provided on the main part (12).

19. (Previously Presented) The surgical instrument according to claim 13, wherein the latch (27) engages on a lever section (28) between the hinge pin (18) and the releasable articulated connection (41).

20. (Previously Presented) The surgical instrument according to claim 13, wherein the latch (27) comprises a locking section which engages on a complementary lever section (28) of the actuatable handle portion (19).

21. (Previously Presented) The surgical instrument according to claim 20, wherein the locking section comprises an undercut, which is formed by a bevel and a thereto adjoining detent cam.

22. (Previously Presented) The surgical instrument according to claim 1, wherein the locking device comprises a second latch (57) that engages a section of the actuatable handle portion (19) opposite a lever section (28) of the actuatable handle portion (19).

23. (Previously Presented) The surgical instrument according to claim 22, wherein the second latch (57) is guided in a recess (58) of the actuatable handle portion (19).

24. (Previously Presented) The surgical instrument according to claim 22, wherein a shoulder (59) is provided on the second latch (57) and positions the actuatable handle portion (19) in the initial position (22).

25. (Previously Presented) The surgical instrument according to claim 23, wherein by releasing the locking device between a shoulder (59) on the second latch, the second latch (57), and an edge region of the recess (58), a further pivoting region

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of the actuatable handle portion (19) is released and the actuatable handle portion (19) is pivotable as far as a stop (37) on the main part (12) or a further stop of the second latch (57).

26. (Previously Presented) The surgical instrument according to claim 22, wherein on changing over the actuatable handle portion (19) from a cleaning position (46) into the working position (22) an automatic locking of the second latch (57) is provided.

27. (Previously Presented) The surgical instrument according to claim 26, wherein the actuatable handle portion (19) is arranged in an initial position.

28. (Previously Presented) The surgical instrument according to claim 1, wherein the locking device comprises a third latch (67) provided on the stationary handle portion (16) that engages the movable part (13).

29. (Previously Presented) The surgical instrument according to claim 28, wherein the stationary handle portion engages at an end section of the movable part (13).

30. (Previously Presented) The surgical instrument according to claim 28, wherein the third latch (67) comprises a pivotable or displaceable latch.

31. (Previously Presented) The surgical instrument according to claim 28, wherein the third latch (67) is secured in a locking position (33).

32. (Previously Presented) The surgical instrument according to claim 31, wherein the third latch (67) is secured by means of a releasable detent connection.

33. (Previously Presented) The surgical instrument according to claim 1, wherein the locking device (76) comprises a fourth latch (77) provided on one of the main part (12) or the movable part (13).

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34. (Previously Presented) The surgical instrument according to claim 33, wherein the locking device (76) is provided on the main part (12) and the fourth latch (77) engages in a guide (32) in the main part (12), in which guide the movable part (13) is guided at least sectionwise.

35. (Previously Presented) The surgical instrument according to claim 33, wherein the fourth latch (77) is provided on a region limiting the working stroke of the movable part (13).

36. (Previously Presented) The surgical instrument according to claim 34, wherein the fourth latch (77) is releasable by means of a pressing, pulling, or sliding mechanism.

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